

What is claimed is:

1. An occupant protection apparatus for a vehicle, comprising:
a deceleration detection device that detects a vehicle deceleration;
5 a lower limb restraining device that restrains a lower limb of an occupant; and
a driving device that, when an output signal of the deceleration detection device
is received, actuates the lower limb restraining device, wherein
a force at which the lower limb restraining device is moved in an occupant lower
limb direction is smaller than a force at which the lower limb of the occupant is restrained.

10 2. The occupant protection apparatus for a vehicle according to claim 1, wherein
the lower limb restraining device has a main body portion that is driven in order to restrain
the lower limb, and a stopping mechanism that holds the main body portion at a position at
which lower limb can be restrained.

15 3. An occupant protection apparatus for a vehicle, comprising:
a deceleration detection device that detects a vehicle deceleration;
a lower limb restraining member that restrains at least one of left and right lower
limbs of an occupant by being moved in an occupant lower limb direction;
20 a driving device that drives the lower limb restraining member in the occupant
lower limb direction;
a control device that controls activation of the driving device when a signal of
the deceleration detection device is received; and
a stopping mechanism that holds the lower limb restraining member such that
25 movement in a reverse direction that is opposite to a movement direction of the lower limb
restraining member is limited so that the at least one lower limb is restrained, wherein
a force at which the lower limb restraining member is moved in the occupant
lower limb direction by the driving device is smaller than a force at which the stopping
mechanism restrains the at least one lower limb of the occupant.

30 4. The occupant protection apparatus for a vehicle according to claim 3, wherein
the main body portion has left and right main body sections that respectively hold the left
and right lower limbs of the occupant.

5 5. The occupant protection apparatus for a vehicle according to claim 3, wherein the stopping mechanism is a one way lock mechanism that limits movement of the lower limb restraining member in the reverse direction that is opposite to the movement direction of the lower limb restraining member, the movement direction being generated by the driving device.

10 6. The occupant protection apparatus according to claim 5, wherein the one way lock mechanism has a ball one way lock mechanism that is configured such that return of the lower limb restraining device to an original position from which the lower limb restraining device has moved is inhibited by movement into a space that remains following the movement of the lower limb restraining device, of at least one ball in accordance with the size of the space.

15 7. The occupant protection apparatus for a vehicle according to claim 5, wherein the lower limb restraining member includes a main body portion that can be abutted with the at least one lower limb, and a piston member that is provided for pushing the main body portion outwards,

20 the one way lock mechanism is disposed within a casing that is provided in an end portion at a vehicle backward direction side of the driving device, and the driving device has a slip-out inhibiting member which closes off the vehicle backward direction side of the casing, and which inhibits slip-out of piston member.

25 8. The occupant protection apparatus for a vehicle according to claim 6, wherein the slip-out inhibiting member is provided at the end of the casing which faces towards the rear of the vehicle, and has a load regulation member, the load regulating member being configured such that, when a driving force of the driving device is generated and a load, that is equal to or greater than a predetermined load is applied to the slip-out inhibiting member, the piston member is released such that movement of the lower limb restraining device is permitted.

30